Upper Rio Grande, Basin and Bay
Expert Science Team (Upper BBEST)

Sul Ross state University
Room UC 210, Alpine, TX
April 22, 2011

MINUTES

Members Present: Zhuping Sheng; Kevin Uranczyk; Ryan Smith; Gary Bryant; Jeffrey Bennett; and Jack Schmidt.

Introductions

Cory Horan, TCEQ, welcomed everyone to the meeting. BBASC members introduced themselves and discussed their background and affiliations.

Overview of SB3 and role of the Basin and Bay Expert Science Team

Cory Horan, TCEQ, provided an overview of the duties of the BBEST and discussed key definitions from Senate Bill 3, the BBEST recommendations, the BBASC work plan, and the importance of adaptive management

SAC Liaison Bob Brandes stated that the Texas Rio Grande Basin is over appropriated and stakeholders decided to limit the scope in the upper Rio Grande to the reach of the Rio Grande and its tributaries from the Rio Conchos to Lake Amistad where environmental flows are considered important, and to the marine environment of the lower Rio Grande basin. He emphasized the charge of the BBEST is to define a sound ecological environment and determine what is needed to support it. He talked about HEFR and other tools available to the group once the scope of work is refined.

Mr. Horan informed the BBEST members that the state resource agencies (TCEQ, TWDB, & TPWD) are to assist the group in an administrative and technical capacity, as determined by the BBEST. He asked members to consider the election of a chair and vice chair to ensure that the decision-making power lies with the BBEST.

BBEST member Ryan Smith noted that SB3 also addressed strategies and the BBEST should consider what flows are needed to ensure a sound ecological environment so when strategies are considered at a later date, a baseline will have been established.

Mr. Horan said the statute specifically speaks directly to any international water sharing treaties and the BBEST cannot make an environmental flow regime that would result in the violation of a treaty. Mr. Brandes noted that the charge is to come up with environmental flow regimes that recognized what the environment needed regardless of where the water came from as was done in the Sabine BBEST. Dr. Sheng mentioned the ongoing restoration activities of the Pecos should be considered in the BBEST review.

Mr. Horan reminded members of the need to determine a period of record based on a comprehensive review of the data available and how it can be applied thru the historical record.

Budget Overview and Discussion
Ruben Solis, TWDB, presented the role of TWDB in overseeing the BBEST budget. He discussed the SB3 funding to support SAC and BBESTs through this fiscal year, and noted that the current House and Senate budgets do not allocate funding beyond August 31, 2011. He distributed packets with the necessary reimbursement forms, and recommended the chairs of the upper and lower Rio Grande BBESTs coordinate on how the limited funding will be split between them. Each BBEST needs to establish a budget for approval by TWDB and EFAG. He mentioned that contracts for work may be difficult due to the August 31, 2011 deadline, and recommended members take on additional tasks that would otherwise have been contracted to outside entities so the hours allotted for each task can be billed by the member before the deadline. Members should turn in invoices on billable hours as soon as possible so that an accurate account of remaining funds is available. He noted that contracts to state agencies and universities are handled under an accelerated process, and state agencies (TPWD and TWDB) can provide technical support in biology, GIS, field measurements/cross sections, and other support to the extent resources allow.

Mr. Horan walked through a sample budget and suggested possible subcommittees. It was noted that the charge of the group is to address environmental flow needs of the Devils and Pecos Rivers.

Set Ground Rules/Operating Procedures, Discussion and Adoption
Mr. Horan presented an overview of potential ground rules and decisions needed regarding what constitutes a quorum and consensus. He explained the administrative role of TCEQ and suggested that he be the primary contact for the group so information can be disseminated. He discussed the website available to the public, and distributed draft meeting rules for consideration. The motion to adopt the rules was made and seconded. Members approved by consensus the meeting rules as drafted.

Current Environmental Flow Efforts
Cory Horan asked members to discuss projects they were involved with, and if those projects can be used to support the needs of the BBEST in developing the environmental flow recommendations.

BBEST member Gary Bryant discussed the Pecos River restoration project and the present/historic flow and water quality data available. He stressed the importance of protecting Independence Creek by determining the source of the water and understanding the relationship between flow and golden algae on the Pecos River. The baseflows are the issue of the Pecos River.

BBEST member Ryan Smith talked about the work being done by the Nature Conservancy of Texas (TNC) on the Devils River. He mentioned work on the groundwater/surface water interaction and flow/ecology relationships for unique fish species in the river. He talked about instream flow/hydrologic (HEFR type) analysis done and instream flow values calculated for the Devils River and San Felipe Creek for use in groundwater management scenarios. He offered to share several documents summarizing this work with the group. He talked about work on Dolan Creek which was similar to work on the Pecos which focused on biota in the spring system and potential sources of oil and gas contamination in the area. He discussed TNC efforts in the environmental flows process in the Cypress Basin between Lake

of the Pines and Caddo Lake, and how the methodology use their helped develop tools like IHA and HEFR.

Members discussed whether the Diamond Y and Balmorhea Springs should be considered in the study since both contribute to the Pecos.

BBEST member Kevin Urbanczyk discussed his work assessing the springs in the lower canyons of the Rio Grande. He said two groups of springs were delineated there and he could provide a detailed geologic assessment using structure and tectonics. He added that the flow direction on the Texas side is from the NW to SE following structural grain.

BBEST member Jeff Bennett discussed the 2008 Rio Grande Workshop which provided momentum for the study of environmental flows for the Big Bend Reach. He talked about the activities resulting from that workshop and the plans to focus on water quality and flooding frequency as a means to obtain financial backing from stakeholders. He mentioned a 2006 water quality project that looked at salinity and nutrients, and two gain loss studies over a 196 mile reach of the Rio Grande. He also added the need to use hydrology to keep exotic plants such as Salt Cedar and Giant Cane under control.

BBEST member Jack Schmidt talked about the research on historic geomorphic changes of the Rio Grande. He added that the environmental management of the Rio Grande is in the measurement of sediment fluxes and prediction of where erosion and deposition will occur, and discussed the ongoing study in sediment transport. He noted that Mexico presently uses a constant steady release of flows and the goal is to convince Mexico to release water in pulse flows that would contribute to more geomorphic work and maintain higher quality habitat between hurricane induced flooding. He said that the river is declining and periodic reset events that occur are not taking the river back to its previous state. The issue is minimizing the adverse habitat losses that occur between the episodic events. He noted that in the lower Concho, the problem is too much sediment in the irrigation ditches.

SAC liaison Bob Brandes asked if it is possible to define a favorable environmental flow regime in the Rio Grande without relying on the flows from Luis Leon. Dr. Schmidt said that all the geomorphic work is based on releases from Luis Leon Dam so those influences would be removed. This would leave the only issues to deal with for environmental flows on the Rio Grande as the low flow regime and setting environmental flow for what is needed immediately after a reset event and in a degraded narrow condition far long after a reset event. This would ignore the issue of slowing the rate of habitat degradation. Mr. Brandes suggested developing a prescription that would include inflows from the Rio Conchos for a standard to be used for future studies. Dr. Schmidt said that estimates already exist from previous studies as to what it takes to fill the channels in the Big Bend reach. Dr. Bennett said that similar events occur on the Pecos where upper reaches dry up and in the lower canyons before recharge. Members discussed recent hydrographs and how it would be beneficial to establish hydrographs that would reflect channel maintenance.

BBEST member Zhuping Sheng talked about the upper reach where they are working to identify areas of high salinity and to reduce salinity discharges that flow into the lower reaches of the river and year round flows where water is used, released and impacting flows downstream. He suggested looking at the impact to flows pre and post 1934 when the dam

was constructed. He worked on the Watershed Protection Plan for the Pecos looking at the surface water/biology interaction and salinity issues.

Dr. Schmidt asked about the fundamental water management problem and the impact the flow recommendations will have on the relative/fundamental contributions of the three systems: Devils River, Pecos River, and the main stem of the Rio Grande.

Formation of Subcommittees and Individual Assignments – Open discussion
Members discussed the Devils River as unregulated and spring fed with groundwater withdrawals and their effect on spring flow as the main issue. Members agreed that the task is to identify base flow needs, and to describe the importance and nature of pulse events and how they affect habitat.

BBASC member Alan Zeman discussed pulse events in the three sections of the Pecos River: state Line to the irrigation district, middle reach, and Devils River and Independence Creek. He said the BBEST needed to consider the effects of irrigation regulations because pulse events no longer occur and the base line will need to be moved back significantly. He added that the irrigation structures constructed over 120 years ago support that the existence of the narrow channels at that time.

Other issues discussed included:
- Importance of defining the biology and riparian components and the correlation of wildlife and habitat use;
- Timing of pulse releases is critical in terms of impact on species life cycles, and selecting surrogate species may be an option;
- In addition to channel narrowing, gravel deposition alters flow by deepening the pools and increases the rapids, and accumulation of organic material;
- Develop other tools using different kinds of relationships between flow and ecology. However, data may be limited;

Ryan Smith and Alan Zeman volunteered to explain the history of the Pecos River and report back to the group at the next meeting. Members decided on three geographic subcommittees. Members on each subcommittee will determine the framework for the geographic area by defining the questions that need to be answered and finding the resources available to answer them.

- **Rio Grande Subcommittee**: Jeff Bennett (Lead), Ryan Smith, Gary Bryant, Zhuping Sheng, Jack Schmidt, and Kevin Uranczyk;
- **Pecos Subcommittee** (state Line to Lake Amistad-418 miles): Gary Bryant (Lead), Zhuping Sheng, Jeff Bennett, Ryan Smith, Jack Schmidt (assist), and Kevin Uranczyk;
- **Devils River Subcommittee**: Ryan Smith (Lead), Gary Bryant, Zhuping Sheng (assist), Jeff Bennett, Jack Schmidt (assist), and Kevin Uranczyk;

Mr. Horan suggested that members who feel they can contribute should participate in these subcommittees, and the leads of each subcommittee should coordinate conference calls and assignment issues.

Subcommittee Sessions

Cory Horan suggested that each committee decide the direction of the subcommittee by defining what tasks need to be completed before the next meeting. He reminded members that agency staff and nonmembers are available to join in the sessions. He added that members can submit to him for distribution any reports or publications that would be beneficial to the members. He will provide copies to members of both the BBEST and stakeholders group.

Mr. Horan explained that TWDB, TCEQ and TPWD are mandated to assist the BBESTs, and suggested that the individual committees identify what is tasks are needed and agency staff will determine what level of support each can provide.

Election of BBEST Chair and Vice Chair

Members approved by unanimous consensus to appoint Kevin Urbanczyk to serve as Chair of the Upper Rio Grande BBEST. Members approved by unanimous consensus to appoint Zhuping Sheng to serve as Vice Chair of the Upper Rio Grande BBEST. Mr. Horan noted the Chair is responsible for preparing and submitting the proposed budget to TWDB and EFAG for approval.

Set Next Meeting

Cory Horan, TCEQ, suggested that the BBEST consider two day workshops to conserve traveling expenses. The next meeting is scheduled for Monday/Tuesday, May 16-17, 2011 at Alpine Sul Ross University in Alpine. The following meetings are tentatively scheduled for the dates and locations listed below. Members will be notified with the time and location.

- Monday/Tuesday, June 6-7, 2011 at Fort Stockton
- Monday/Tuesday, July 11-12, 2011 at Sul Ross University
- Thursday/Friday, August 11-12, 2011 at Sul Ross University

Public Comment

There was no public comment at this time.

Adjourn